

Office Memorandum • UNITED STATES GOVERNMENT

TO : Chief, R&D Branch

DATE: 23 April 1962

FROM : Chief, R&D Lab

SUBJECT: Proposed AT-3 Test Set

REF : R&D 214 dated 2 November 1961

DOCUMENT NO. 5
 NO CHANGE IN CLASS. ☐
 IF DECLASSIFIED
 CLASS. CHANGED TO: TS S 200
 NEXT REVIEW DATE: _____
 AUTH: NR 70-2
 DATE: 4/12/80 REVIEWER: 037189

1. To meet the requirements of paragraph 1 of the above reference, the proposed AT-3 Test Set should employ the following:

- a. A CU-10 signal actuate type circuit which would discriminate and actuate an indicator lamp when the AT-3 is keyed at the 150 cps IDY rate.
- b. An RF dummy load and RF ammeter to measure the AT-3 power output capability.
- c. The RF ammeter and a CA-3 test cartridge may be used to indicate (comparatively) the AT-3 dot and dash duty cycles as follows: Referencing the RF ammeter, the AT-3 IDY button will be pressed and the ammeter set (variable/shunt) to a predetermined level marked on the scale. Two additional colored marks will be placed on the scale, one for dot duty cycle and the other for dash duty cycle. The tape cartridge will contain perhaps a 15-second recording of dots, followed finally by a 15-second recording of dashes.

2. After the CU-10 has indicated proper IDY operation and the power output has been read and found normal, the IDY is pressed again and the ammeter switched into shunted position and adjusted to the preset level. The test CA-3 is inserted and test message keyed.

3. The following sequence of events should occur in forty-five seconds: (a) the CU-10 actuates on the 150 cps CO-3 signal; (b) the ammeter indicates to the mark set for the dot duty cycle; and (c) the ammeter jumps up to the duty cycle mark for dashes.

4. The test set will be shielded to attenuate RF radiation and operate from 110 or 220 volts, $\pm 20\%$, 50/60 cps, self-contained AC power supply.

SECRET

Investigate the shortcomings of the CU-10 actuate circuitry and adapt for use with test set	120 man-hours
Design RF circuitry, ammeter circuitry, power supply, etc.	200 man-hours
Package and test	180 man-hours
Total man-hour estimate:	500

Acting

25X1